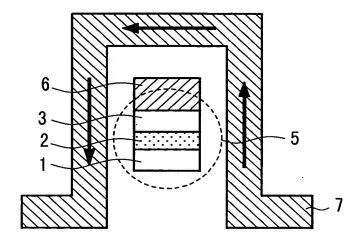
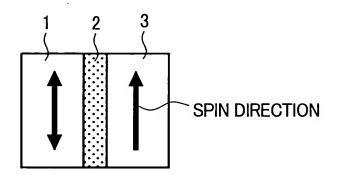
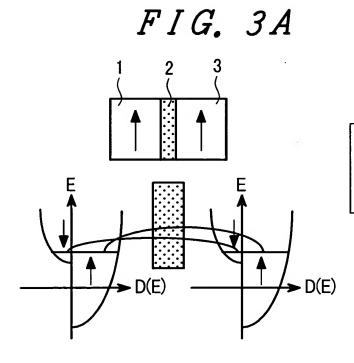
F I G. 1



F I G. 2





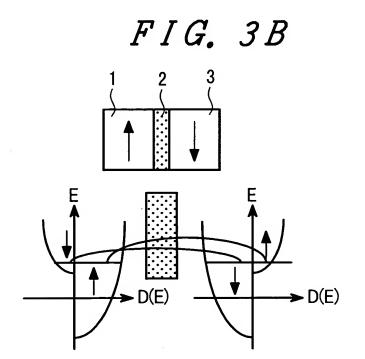
1/R~D1(E)•D2(E)

1:BEFORE TUNNELING

2:AFTER TUNNELING

**RESISTANCE: SMALL** 

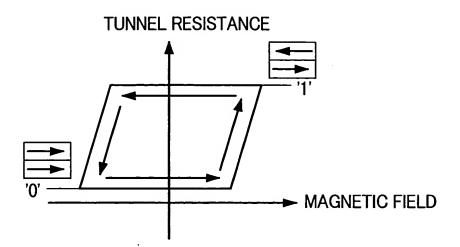
WHEN THE SPINS ARE PARALLEL

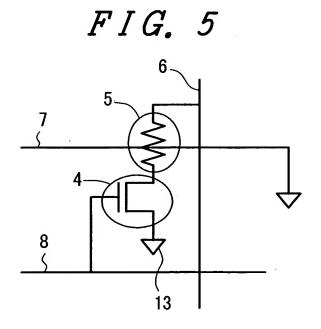


RESISTANCE: LARGE

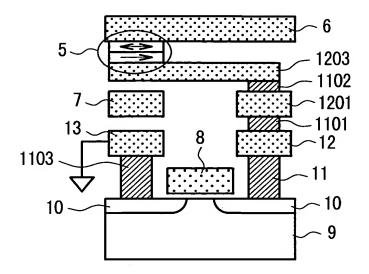
WHEN THE SPINS ARE ANTI-PARALLEL

FIG. 4

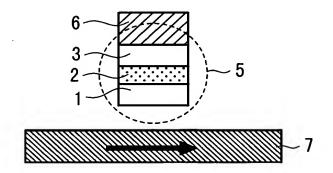




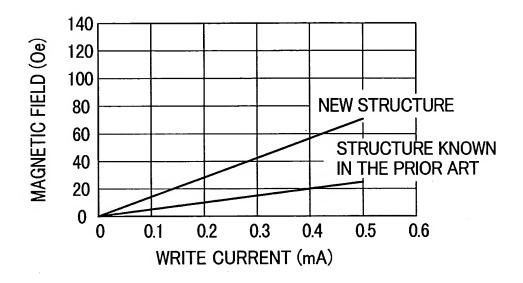
F I G. 6

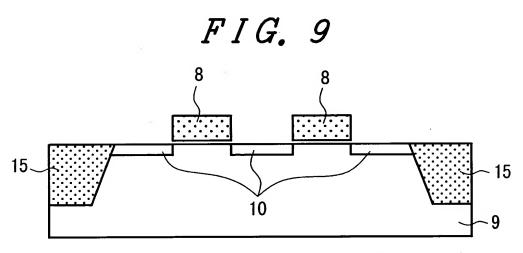


F I G. 7



F I G. 8





(CROSS SECTION ALONG AA-DIRECTION IN FIG.10)

FIG. 10

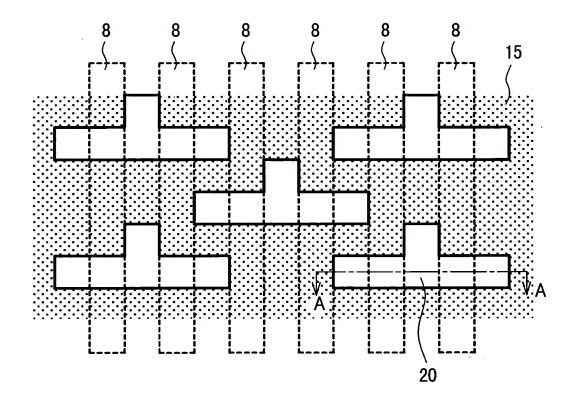


FIG. 11

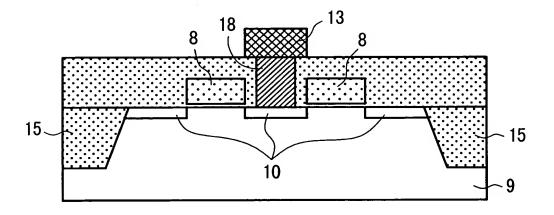


FIG. 12

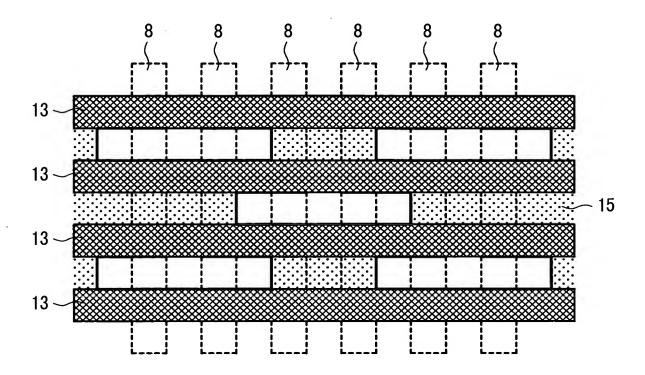


FIG. 13

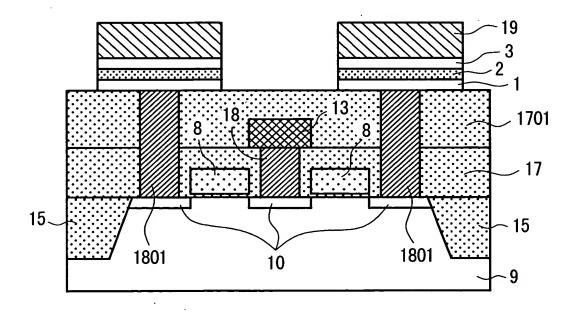


FIG. 14

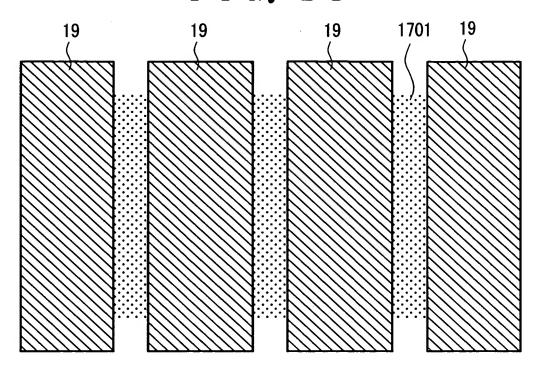


FIG. 15

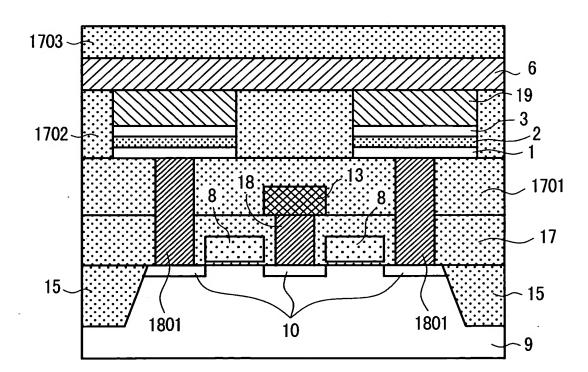


FIG. 16

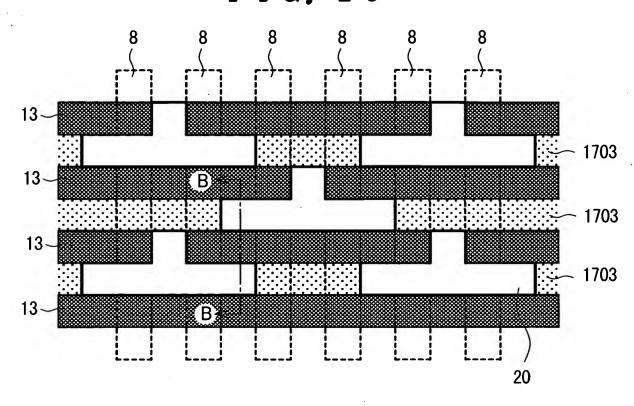
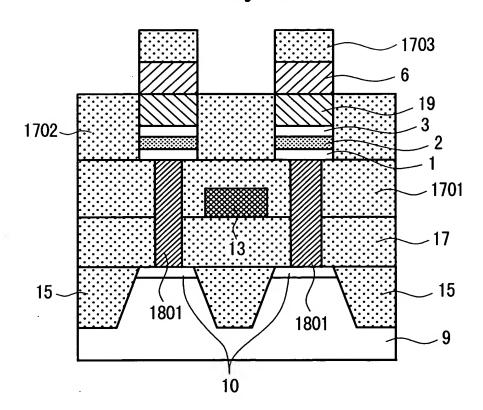
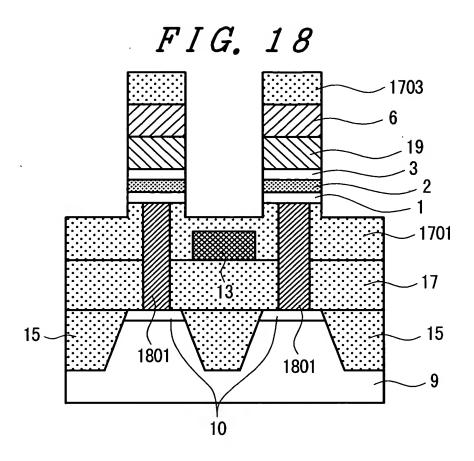


FIG. 17





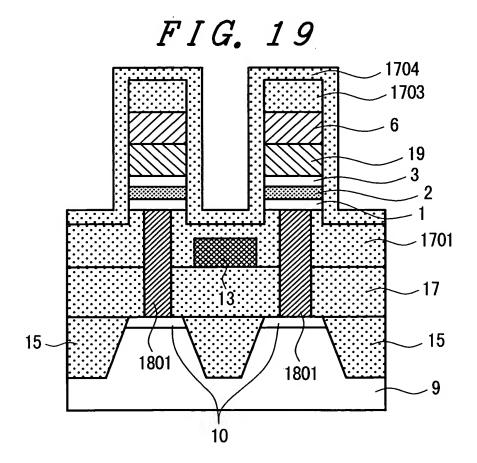


FIG. 20

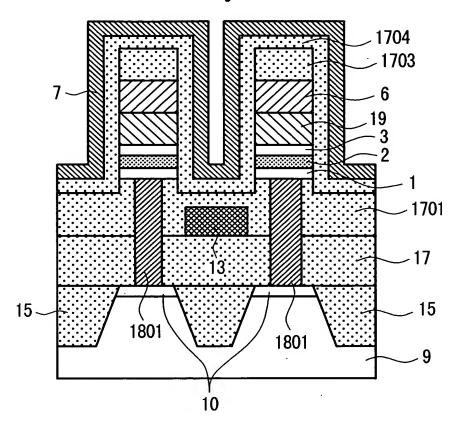


FIG. 21

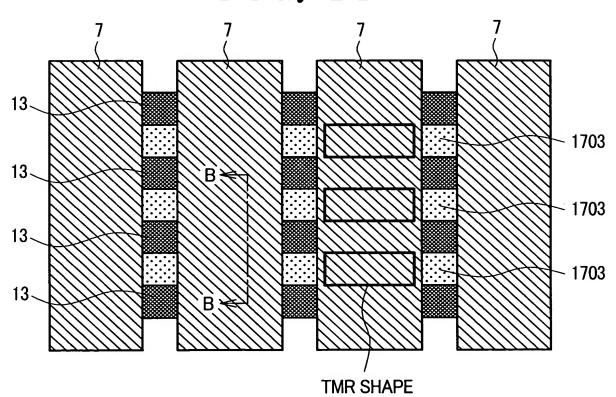


FIG. 22

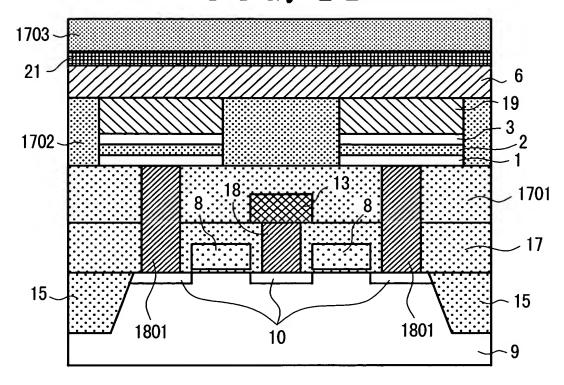


FIG. 23

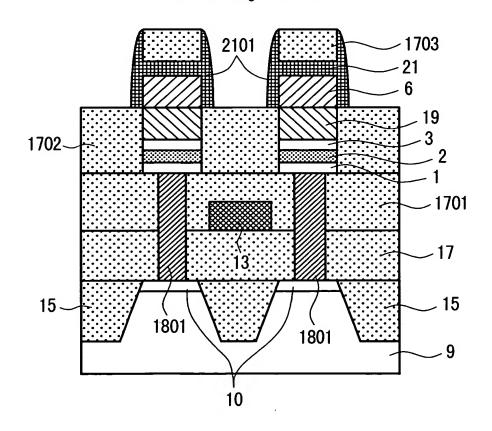


FIG. 24

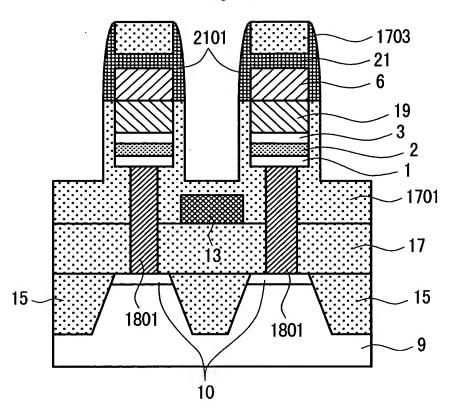


FIG. 25

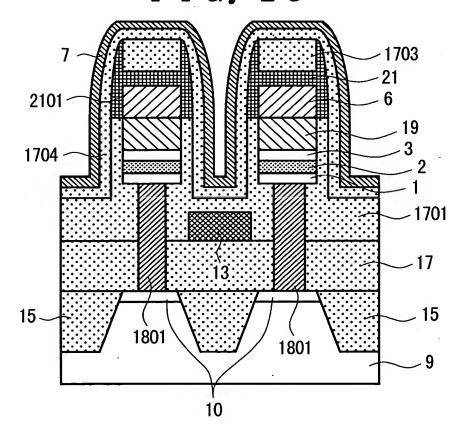
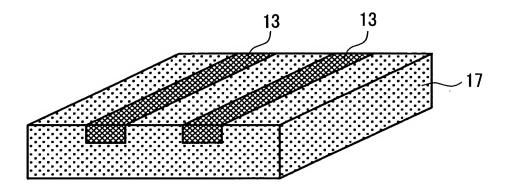


FIG. 26



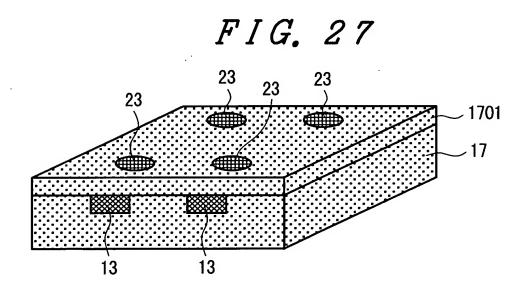


FIG. 28

19
1702
1701
1701
1701
1701

FIG. 29

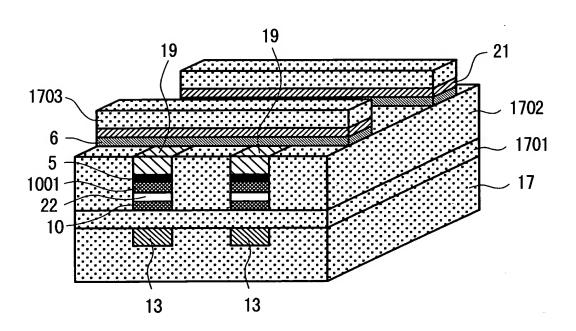
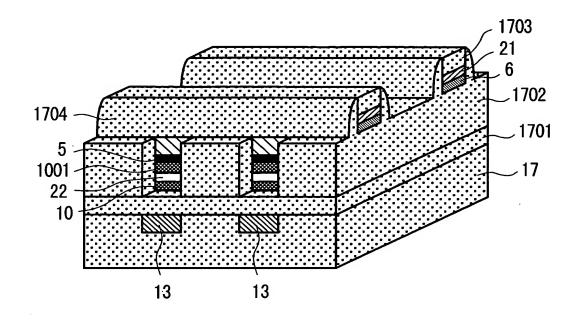


FIG. 30



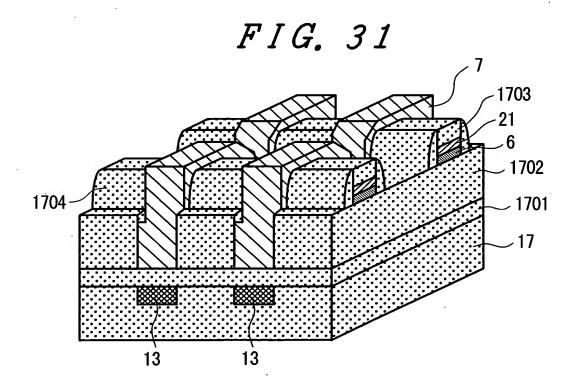


FIG. 32

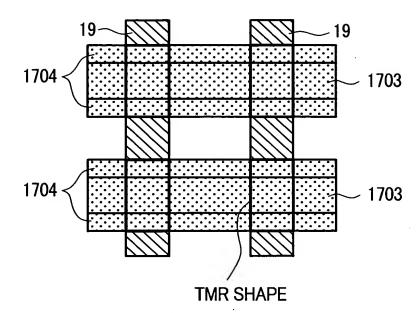


FIG. 33



1ww \_\_\_\_\_

WR \_\_\_\_0



